

## A new species of the genus *Ravitria* Gorbunov & Arita (Lepidoptera, Sesiidae) from Yunnan, China

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**Abstract** A new species, *Ravitria yunnanensis* sp. nov. is described and figured from Yunnan Prov., China. New combinations are established for the following four species: *Ravitria aurifasciata* (Gorbunov & Arita, 1995), *Ravitria confusa* (Gorbunov & Arita, 2000), *Ravitria pyrosema* (Hampson, 1919) and *Ravitria sotchivkoi* (Gorbunov & Arita, 1999), combb. nov.

**Key words** Lepidoptera, Sesiidae, *Ravitria yunnanensis* sp. nov., Yunnan, China.

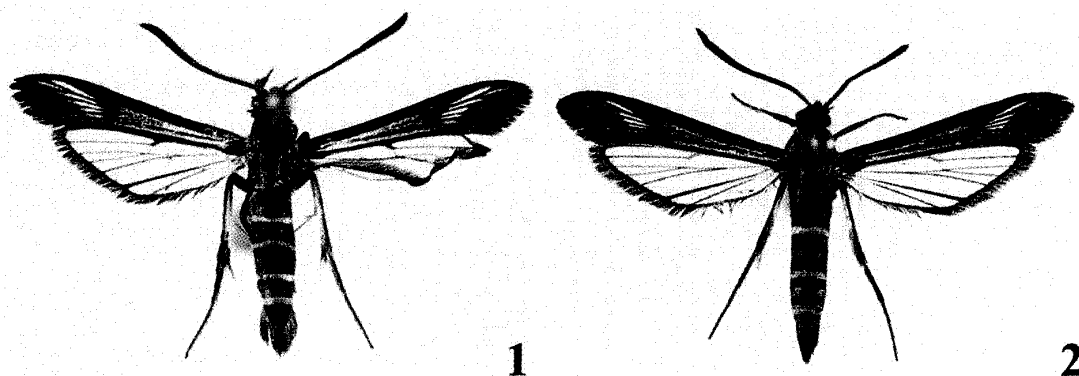
In 1999 we erected a new genus of the tribe Synanthedonini (Lepidoptera, Sesiidae) and named it *Vitraria* (Gorbunov & Arita, 1999). Unfortunately, it turned out that this name is a junior homonym of *Vitraria* Jordan & Evermann, 1903 (Vertebrates, Pisces) and we publish a new replacement name, *Ravitria* Gorbunov & Arita, 2000, for *Vitraria* Gorbunov & Arita, 1999 (Gorbunov & Arita, 2000b).

In the present paper we establish new combinations for all species which were previously included into the genus *Vitraria* Gorbunov & Arita, 1999, namely *Ravitria aurifasciata* (Gorbunov & Arita, 1995), *Ravitria confusa* (Gorbunov & Arita, 2000), *Ravitria pyrosema* (Hampson, 1919) and *Ravitria sotchivkoi* (Gorbunov & Arita, 1999), combb. nov. Besides that, we describe a new species, *Ravitria yunnanensis* sp. nov., from high mountain areas of the province of Yunnan in southern China herein. The types of the new species are deposited in the collection of the senior author (COGM).

### *Ravitria yunnanensis* sp. nov. (Figs 1–3)

**Description.** Male (holotype) (Fig. 1). Alar expanse 19.9 mm; body length 10.2 mm; forewing 9.2 mm; antenna 5.6 mm.

**Head:** antenna dark brown to dark brown with dark purple sheen, with admixture of individual orange to red-orange scales ventrally; scapus dark brown to black with greenish sheen, externally white with a few orange scales; frons dark brown with dark purple sheen, with a narrow snow-white lateral margin; labial palpus externally dark brown to black with dark purple sheen, internally white mixed with pale orange scales; vertex dark brown to black with dark green sheen; occipital fringe dorsally mixed with yellow and black scales, laterally red-orange. **Thorax:** patagia dark brown to black with purple-bronzed sheen; tegula dark brown to black with green-bronze sheen, with a few grey and pale orange scales at base of forewing; meso- and metathorax dark brown to black with dark greenish sheen; thorax laterally dark grey-brown with green-blue sheen, with a small pale orange spot medially; posteriorly metepimeron and metameron dark grey-brown with bronze sheen, covered with white hair-like scales. **Legs:** neck plate dark brown to black with greenish



Figs 1-2. Moths of *Ravitria yunnanensis* sp. nov. 1. Holotype, ♂. Alar expanse 19.9 mm (COGM). 2. Paratype ♀. Alar expanse 22.0 mm (COGM).

sheen; fore coxa dark brown to black with green-violet sheen; fore femur dark brown to black with green-bronze sheen; fore tibia dorsally dark brown to black with green-violet sheen, ventrally dark grey with purple-bronze sheen; fore tarsus dorsally dark grey with purple-violet sheen, with admixture of grey scales on four basal tarsomeres distally, ventrally white with purple tint; mid coxa dark grey with green-purple sheen, with a few whitish and pale orange scales; mid femur dark brown to black with green-violet sheen, with admixture of white hairs at posterior margin; mid tibia exterior-dorsally dark brown to black with bronze-purple sheen, with admixture of pale orange, elongate, pointed scales dorso-distally, interior-ventrally dark grey with bronzed sheen; spurs whitish with golden tint; mid tarsus exterior-dorsally dark grey with bronze-purple sheen, interior-ventrally white with golden tint; hind coxa dark grey with green-purple sheen, with a few whitish and pale orange scales; hind femur dark brown to black with green-violet sheen, with admixture of white hairs at posterior margin; hind tibia exterior-dorsally dark brown to black with green-purple sheen, with a small ochreous spot at base of mid spurs and with a few ochreous, elongate, pointed scales distally, interior-ventrally white with bronze sheen; spurs whitish with golden tint; hind tarsus exterior-dorsally dark brown to black with greenish sheen, interior-ventrally white with golden tint. Abdomen: dorsally dark brown to black with dark purple sheen; tergites 2, 4, 6 and 7 each with a narrow brick-orange stripe distally; ventrally dark brown to black with dark green-purple sheen; sternite 4 with a narrow brick-orange stripe distally; anal tuft dark brown to black with green-bronze sheen, slightly paler distally, with a few white scales distally on lateral part.

Forewing: basally black with green-violet sheen, with a few brick-red scales at base of CuA-stem; costal margin dark brown to black with dark green-bronze sheen; CuA-stem, anal margin dark brown to black with dark violet sheen; discal spot dark brown to black with dark purple sheen, with admixture of brick-red scales distally; veins within external transparent area dark brown to black with dark green sheen, densely covered with brick-red scales; apical area dark brown to black with dark bronze-purple sheen, densely mixed with brick-red scales between veins; transparent areas poorly developed; anterior transparent area distally densely covered with dark brown scales with dark purple sheen; external transparent area small and narrow, divided into five cells, cells between veins  $R_4-R_5$  and  $M_2-M_3$  extremely narrow; cilia dark brown with dark bronze-purple sheen. Hindwing: transparent; veins dark brown with dark purple sheen; discal spot dark brown with dark purple sheen, small, cuneiform, exceeding to base of vein  $M_2$ ; outer margin extremely narrow, dark brown with dark purple sheen; cilia dark brown with dark bronze-purple sheen.

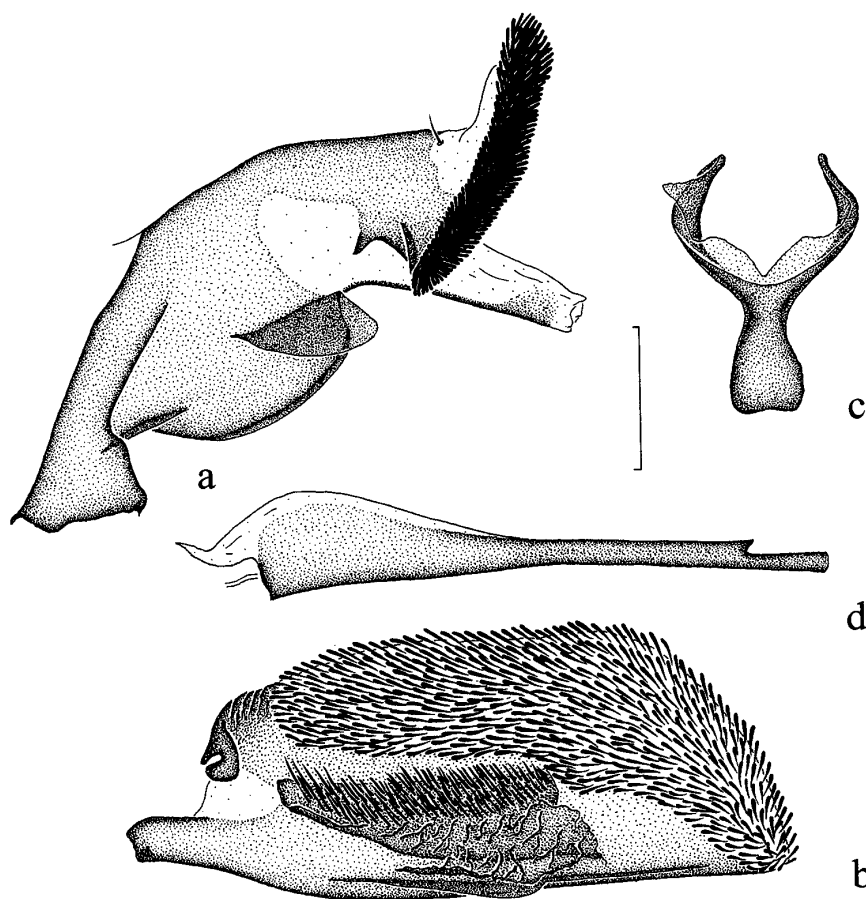


Fig. 3. Male genitalia of *Ravitria yunnanensis* sp. nov., holotype (genital preparation No GO-00-01). a. Tegumen-uncus complex. b. Valva. c. Saccus. d. Aedeagus. Scale bar: 0.5 mm.

Male genitalia (holotype, genital preparation OG-00-01) (Fig. 3). Tegumen-uncus complex (Fig. 3a) broad; scopula androconialis well-developed, rather long; uncus with a narrow crista ventrally; crista gnathi medialis broad, distally divided into two narrow cristae; crista gnathi lateralis double: distal part rather large subcordiform, but proximal part narrow; valva (Fig. 3b) trapeziform, crista sacculi well-developed, large, divided into two pocket-shaped parts: dorsal part larger and armed at distal margin with short, strong, pointed apically setae; ventral part small and without setae; saccus (Fig. 3c) slightly shortened than vinculum, somewhat broadened and bifurcate basally; aedeagus (Fig. 3d) relatively thin, slightly shorter than valva, with a rather large tooth subdistally; vesica with numerous minute cornuti.

Female (paratype) (Fig. 2). Alar expanse 22.0 mm; body length 11.1 mm; forewing 10.1 mm; antenna 6.0 mm.

Head with antenna dark brown to dark brown with dark purple sheen, with admixture of yellow scales dorsally in basal half; scapus dark brown to black with greenish sheen, dorsally and yellow ventrally; labial palpus externally dark brown to black with dark green sheen, internally pale yellow-orange; occipital fringe dorsally mixed with yellow and black scales, laterally pale yellow-orange; abdomen with tergites 2, 4 and 6 each with a narrow brick-orange stripe distally; anal tuft dark brown to black with dark purple sheen; forewing with anterior and posterior transparent areas nearly undeveloped; external transparent area smal-

ler, divided into four cells between veins  $R_3$  and  $M_3$  (cell between veins  $R_4$ – $R_5$  undeveloped); hindwing with discal spot yellow-orange with golden sheen; outer margin somewhat broader. Colour patterns otherwise as in male.

Female genitalia. Not examined.

Individual variability. Unknown.

Differential diagnosis. By the conformation of the external transparent area of the forewing, this new species seems to be closest to *R. confusa* (Gorbunov & Arita, 2000) and *R. aurifasciata* (Gorbunov & Arita, 1995), but it can be distinguished by the coloration of the neck plate and fore coxa (neck plate with admixture of white scales laterally; fore coxa with a broad yellow stripe externally in *R. confusa* and *R. aurifasciata*), abdomen dorsally (tergite 2 with admixture of yellow orange scales lateral-distally; tergite 4 with a broad, laterally slightly broadened, orange stripe distally; anal tuft densely mixed with yellow-orange scales in these species compared) and by the poorly developed transparent areas of the forewing (well-developed in these species compared; *cp.* Figs 1–2 with figs 1, 2, 13a–d and 14a–d in Gorbunov & Arita, 2000a). From *R. sotchivkoi* (Gorbunov & Arita, 1999), *R. yunnanensis* sp. nov. differs by the coloration of the occipital fringe (yellow dorsally and pale yellow laterally in *R. sotchivkoi*), metathorax (entirely red-orange in the species compared), fore coxa (yellow to pale yellow externally in *R. sotchivkoi*), abdomen (dorsally tergite 1 with a few pale yellow scales laterally; tergite 4 with a broad red-orange stripe distally; tergites 6 and 7 each with a narrow red-orange stripe distally; ventrally sternites 4–7 each with a narrow yellow stripe distally in the species compared) and by the structure of the transparent areas of the forewing (transparent areas well-developed; external transparent area large, divided into six cell in *R. sotchivkoi*; *cp.* Fig. 1 with figs 12 and 29 in Gorbunov & Arita, 1999). Besides that, the males of these two species are separable by the conformation of the male genitalia, especially by the shape of gnathos, valva, crista sacculi and aedeagus (*cp.* Figs 3a–d with figs 44a–d in Gorbunov & Arita, 1999). From *R. pyrosema* (Hampson, 1919), *R. yunnanensis* sp. nov. differs by the poorly developed transparent area of the forewing (well-developed; external transparent area extremely large, divided into six cells, level to vein  $M_2$  about five times as broad as discal spot in the species compared; *cp.* Fig. 1 with fig. 30 in Gorbunov & Arita, 1999).

Bionomics. The host plant and larval bionomics are unknown. The type series (male and female in copula) was netted in the beginning of July at about 3,400 m a.s.l.

Habitat. The type series was collected at a border of a high mountain mixed forest.

Distribution. Known from the type locality in southern China.

Material examined. Holotype, ♂ (Fig. 1), S. China, Yunnan, env. of Zhongdian, 3,400 m, 3. VII. 2000, A. Gorodinski leg. (genital preparation OG-00-01) (COGM). Paratype. 1 ♀, same locality and data, 3,400 m, 3. VII. 2000, A. Gorodinski leg. (COGM).

Etymology. This new species is named after Yunnan, a province of southern China.

### Acknowledgements

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## 摘 要

中国雲南の *Ravitria* 属 (鱗翅目, スカシバガ科) の 1 新種について (Oleg G. Gorbunov・有田豊)

中国雲南省で採集された *Ravitria* 属に所属するスカシバガを調査した結果, 新種であることを認め記載した. *Ravitria* 属は今までに下記の 4 種が記録されている. 北ベトナムから 2 種, *R. aurifasciata* (Gorbunov & Arita, 1995), comb. nov., *R. confusa* (Gorbunov & Arita, 2000), comb. nov., アッサムから *R. pyrosema* (Hampson, 1919), comb. nov., ネパールから *R. sotchivkoi* (Gorbunov & Arita, 1999), comb. nov.

*Ravitria yunnanensis* Gorbunov & Arita sp. nov. (Figs 1-3)

雲南省北西部中甸の標高 3,400 m の高地で 7 月 3 日に交尾中の個体が得られた. *Ravitria* 属に所属するスカシバガ 4 種と比較した結果, 前翅中室外方透明紋の形態は, 北ベトナムから知られている 2 種, *R. aurifasciata* (Gorbunov & Arita, 1995) と *R. confusa* (Gorbunov & Arita, 2000) に良く似ている. これらの 2 種は前胸下面前部に白い鱗粉が混ざるが, 本種では黒一色であることで区別される. 雄ゲンタリアでも容易に区別される.

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